MOPHIMS

USER GROUP NEWSLETTER

November 2019

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Data Updates

The following table lists the most current data years available on MOPHIMS MICAs. Please note much of the data from the Data MICAs feed the Community Data Profiles, which have also been updated.

- The County Level Study Profile and Chronic Disease Profiles now have the most current 2016 survey data available. Click the MICA titles below to be automatically redirected to that website.

	MICA
2017	Birth MICA
2015	Cancer Incidence MICA
2017	Chronic Disease Deaths MICA
2015	Chronic Disease Emergency Room MICA
2015	Chronic Disease Inpatient Hospitalization MICA
2017	Death MICA
2015	Emergency Room MICA
2017	Fertility and Pregnancy Rate MICA
2015	Injury MICA
2015	Inpatient Hospitalization MICA
2017	Population MICA
2017	Pregnancy MICA
2015	Preventable Hospitalization MICA
2015	Procedures MICA
2016	WIC Child MICA
2016	WIC Infant MICA
2016	WIC Prenatal MICA
2016	WIC Postpartum MICA
2016	WIC Linked Prenatal- Postpartum MICA

We love our stats...

- **3,822** user group members
- **76,337** webhits in 2019 (YTD)
- Most popular MICA: Death MICA (11% of hits)
- Most popular Profile: County-Level Study (9%)

MISSOURI INFORMATION FOR COMMUNITY ASSESSMENT

MISSOURI INFORMATION FOR COMMUNITY ASSESSMENT DATA PROFILES

MOPHIMS

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In this issue...

November 2019

Life Expectancy & Mortality

in Missouri

Missouri versus US life expectancy

▼ 1.5 years

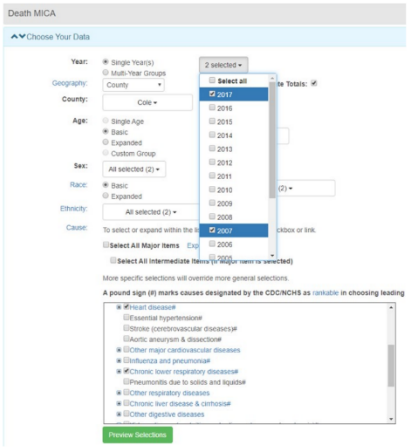
in 2017

Recently a **FOCUS article** from the Bureau of Vital Statistics indicated a 0.8 year (ten month) decrease in the life expectancy of Missouri residents in 2018 (77.0 years) when compared to the high, set in 2012 (77.8 years). The report highlights multiple causes, specifically deaths in younger persons due to opioid overdoses (up 133.8% from 2008), suicide (up 53.5%) and homicide (up 30.7%). As a result, the death rate for persons aged 15-24 and 25-34 has increased over 30% in a decade. Furthermore, the death rate for 25-34 year olds is at its highest level since the 1950's. Interestingly, the rate of deaths from the Baby Boomer population has actually slightly decreased when rates are age-adjusted. This means that this decrease in life expectancy is primarily due to changes in the life expectancy of Missourians aged 15-64. Overall, however, the major causes of death across the state did not change, with the top three leading causes being heart disease, cancer and chronic lung disease.

If you wish to dig deeper into life expectancy the Missouri Department of Health and Senior Services website has many tools available. To access the tools, click the Data & Statistics tab on the right hand side of the site. From there, look under the Community Health Assessment and Intervention Planning and there you will find **Life Expectancy Data**. Here you can read why life expectancy is an important statistic, what data is used to calculate life expectancy and for what populations life expectancy is calculated. Annual statistics are available and there are also older reports showing changes in life expectancy over the last 20 years.

What could you do in 10 months?

We understand that death trends that were found for the entirety of Missouri can differ from trends found in your local community. You may be interested to know if your county or area is experiencing a similar trend to that found in the state report. MOPHIMS gives users the ability to investigate their specific region regarding death rates, among many other health statistics. This article highlights the **Death MICA** and shows how it can be utilized to collect data at the county level to see how a county stacks up against Missouri. To use the Death MICA navigate to the MICA homepage and select the Death MICA link *(at right)*.



Once in the Death MICA we can start replicating the findings of the Focus article, but this time run things at a local level. Let's compare an eleven year gap, in this case 2007 to 2017. Note that the 2018 death data is currently being implemented into the MOPHIMS systems and will be available in the near future. Next, we can select our geography, in this case Cole County. We can keep the basic age and race categories groups because they match what was used in the report.

Then we can select the three highest causes of death, specifically heart disease, cancer and chronic lung disease. To do so we should uncheck "Select All Major Items" and then check "Heart disease#", "Cancer#" and "Chronic lower respiratory diseases#" *(at left)*.

Our young people are **dying...**

opioid overdose ▲ 134%

suicide ▲ 54%

homicide ▲ 31%

'12 - '18 increase for young adults in Missouri

Life Expectancy & Mortality

in Missouri

Now that the data is selected, we can generate a table. As shown *below*, we placed the Causes in the rows and the Years in the column of the Build Your Results section. In the Missouri report, deaths caused by cancer and heart disease each decreased by about 12% between 2007-2017, while chronic lower respiratory disease deaths increased about 7%. So how does Cole County compare?

Here we can see that Cole County's death rates due to heart disease decreased much more than Missouri as a whole-about 31%. Cancer death rates also decreased about 40%. Furthermore, there was a noticeable increase (56%) in chronic lung disease deaths, much more than the state average. This query shows us that Cole County's death rates for heart disease, cancer and chronic lower respiratory disease are going in the same direction as the State, but with a much large magnitude.

Table Results

Save Table As ▾ | Send Table to Side by Side

Title:	**Missouri Resident Deaths**					
Data selected in addition to rows and columns below:	County: Cole;					
Year:	2007	2007	2017	2017	Total for selection	Total for selection
Statistics:	Count	Rate	Count	Rate	Count	Rate
Cause						
Cancer#	138	186.23	133	142.20	271	159.89
Heart disease#	144	187.62	127	134.42	271	159.61
Chronic lower respiratory diseases#	25	34.75	50	54.13	75	45.34
Total for selection	307	408.59	310	330.75	617	364.85
Rate:	**Death rates are annualized per 100,000 residents and are age adjusted to the U.S. 2000 standard population.**					
Source:	**DHSS - MOPHIMS - Death MICA**					
Generated On:	**9/20/2019 1:17:43 PM**					

So how does your County/region compare? Are you seeing the same trends as the state or is your geography moving in different directions? With MOPHIMS you can have the data, and with data you can now make informed decisions in assessing the health of your community.

Missouri Annual Life Expectancy

Year	Life Expectancy (In Years)
2018	77.0
2017	77.1
2016	77.3
2015	77.3
2014	77.7
2013	77.7
2012	77.8
2011	77.6
2010	77.6
2009	77.6
Decrease from 2012 - 0.8 years	*Difference from 2017 U.S. (78.6)* - 1.5 years

"It is not the length of life, but the depth of life."
-R.W. Emerson

November 2019

Public Health Spotlights

BHCADD is happy to announce two new members to their team, Leighton Garret and AJ Womack.

AJ Womack

AJ Womack came to us in April with a vast teaching experience, and we are glad to have him. Previously he taught high school and middle school science for six years at public and private schools in Charleston, South Carolina. AJ has been a real busy bee since he joined us. He has already done his first MICA training, prepared for exhibits, responded to a stream of data requests, has completed SAS Programming I and II, and earned his Base SAS certification all in five months. To say he started off running would be an understament.

AJ received his Bachelors of Arts in Psychology from University of Missouri Columbia. He later completed his Master's in Education and Ph.D. in Science Education also from Mizzou. He joined the team as a Research Analyst II, and will primarily be working with Patient Abstract System data. He will also be part of our MICA training team. You may have the opportunity to meet him in one of our upcoming classes if you happen to sign up in the fall or next spring. When asked what the transition has been like from education to public health, he says he is glad he now gets to utilize his computer programming and statistical knowledge that he gained during his graduate degree.

AJ is very family oriented. He and his wife (Tassi) have two kids- Estellise who's a 3yr old girl and Judson who is a 2yr old boy. He runs an adult Sunday school with his wife, where they teach a Fundamentals of Marriage class. He is currently searching for land to buy in Osage County. They hope to someday have a farm house with animals including cattle and horses just to name a few. When he gets some downtime he enjoys playing video games, woodworking and electrical wiring which he uses to rebuild arcade cabinets.

Leighton Garrett

Leighton Garrett joined the Bureau of Healthcare Analysis and Data Dissemination in Mid-July after working for two and half years as a Research Analyst III with the Bureau of Vital Statistics. In her previous position, she worked as both data analyst and data abstractor for the Missouri Zika Surveillance Intervention and Referral System which collected data on Zika related birth defects. Leighton will be working with Marriage and Divorce data, and hopes to get involved with future MOPHIMS trainings.

In 2011, Leighton received her Bachelor of Science in Economics with a minor in Korean from Ohio State University. In 2014 she moved to Gwangju, South Korea to teach English kindergarten and elementary school kids. While there, she got to visit Kyoto and Osaka, Japan which she says are very tourist friendly. Upon returning, she joined University of Missouri-Columbia where she received her Master's in Public Affairs. In graduate school, she worked as a graduate research assistant for the Institute of Public Policy.

It's from her work in economics (though she actually cared about people and not markets) and emphasis on data during her graduate studies that her interest in data collection and analysis began.

Outside of work, you will most likely find Leighton knitting. We've often seen her knit through her lunch breaks, and especially at this time of the year because she is trying to finish Christmas gifts. We're stunned each time to see what she is capable of creating with just a skein of yarn and two needles. She also enjoys reading, playing Dungeons and Dragons, and being captured by her cat Izzy.

November 2019

Training Update

We had an action packed training schedule this summer and fall. As we crisscrossed the state, from the familiar lands of central MO, to the big cities on either side of state, and the rolling hills and relaxed atmosphere of southern Missouri, we met and learned from outstanding participants. Thanks again, data nerds! If you were unable to join us this year, check out our training materials on the **Health Data Training** webpage.

- Jefferson City
- Columbia
- St Louis
- Kansas City
- Springfield
- Sikeston

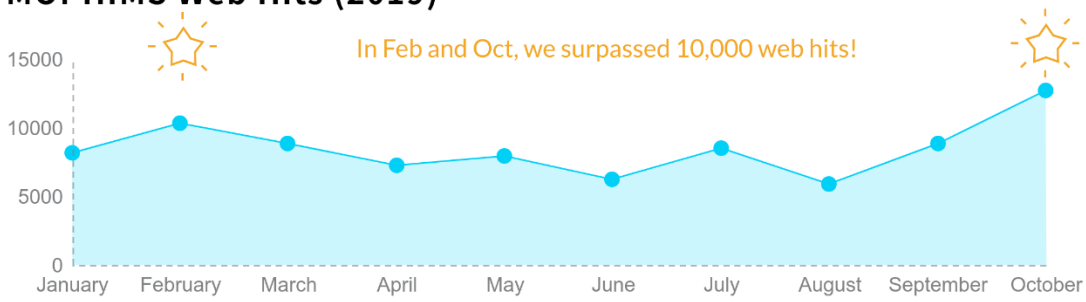
MOPHIMS Training Metrics

87
Participants

4.7
Overall Score- Increased Knowledge
(5-pt scale)

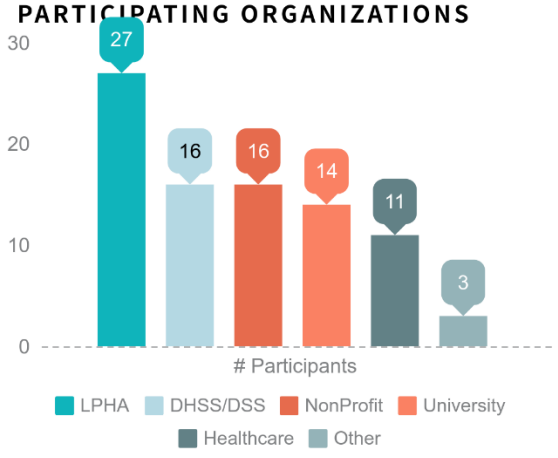
6
Locations

MOPHIMS Web Hits (2019)



The reviews are in...	Avg. Score
comfortable using MOPHIMS	4.4
↑ understanding of data viz	4.7
Likely to ↑ community impact	+134%
Registered through User Group	27%

PARTICIPATING ORGANIZATIONS



November 2019

Marriage & Divorce

How does Missouri stack up?

39,692

MARRIAGES IN 2018

Currently the only metric of marriage and divorce on the MICA Profiles is the number of divorces involving children on the **Child Health Profile**. However, there is the possibility of adding some marriage and divorce statistics to the MICA Profiles in the future.

In 2018 there were 39,692 marriages for a rate of 6.5 per 1,000 population and 18,723 dissolutions (divorces, annulments, and legal separations) for a rate of 3.1 per 1,000 population. The marriage to divorce ratio was 2.12 which is used to measure the relationship between marriage and divorce.

The most popular month to get married in 2018 was October and the most popular month get divorced was August.

Due to the legalization of same-sex marriage in 2015 the way Missouri reports marriage statistics is split between male/female marriage and same-sex marriages. In 2018, there were 1,158 same-sex marriages. However, divorce decrees do not have a place to indicate the sex of the participants so it is assumed that all divorces are between men and women. Logically this is not the case, but currently there is no good way to determine the number of same-sex divorces.

Most Popular Month to Be Married

Most Popular Month to Become Divorced

68%

of divorces involving children resulted in **joint custody agreements**

The 2018 median age of women in male/female marriages was 29.3 years-old compared with the median age of women in same-sex marriages which was 31.5 years-old. The median age of men in male/female marriages was 31.2 years-old compared with the median age of men in same-sex marriages which was 33.8 years-old.

18,723

MARRIAGES DISSOLVED IN 2018

One particular difference between male/female marriages and same-sex marriages is the percentage of first marriages versus previously married individuals. For women in male/female marriages 32.9% were previously married at the time of marriage whereas 26.2% of women in same-sex marriages were previously married. 33.3% of men in male/female marriages had been previously married compared with 17.4% of men in same-sex marriages had been previously married.

The median age of women who got divorced in 2018 was 39 years-old and men's median age was 41 years-old. The median length of marriage ending in divorce was 8 years.

10,881 wives petitioned for divorce and 6,881 husbands petitioned for divorce in 2018. Also, 8,569 divorces involved children and in 5,809 cases (68%) joint custody was given.

These are just a few of the statistics are available and could be included on the MICA Profiles. Suggestions or comments about marriage and divorce statistics that would be useful to add are welcome. Please direct comments, questions, or suggestions to MophimsUserGroup@health.mo.gov.

Q & A

Is there more recent hospitalization/emergency room data available on MOPHIMS?

A common question that we receive during our MOPHIMS trainings and through e-mail is why the hospital and emergency room data is only displaying through 2015?

The answer has to do with a change in coding systems related to hospital billing data. Beginning in the 4th quarter of 2015, hospital discharge data is now required to be submitted using the ICD-10-CM coding system. Previously, beginning in 1999, data had been submitted based on ICD-9-CM. We were able to work around the 4th quarter of 2015 and produce a custom annual file for 2015, which was based on the older ICD-9-CM. Beginning in 2016, though we are strictly using the ICD-10-CM system.

There are many changes between the two coding systems. Generally, the new ICD-10-CM codes have the potential to display a lot more detail. As an example, ICD-10-CM has approximately 69,000 diagnosis codes compared to only about 13,000 for ICD-9-CM. Because of these changes, there were many categories that experienced large fluctuations between the pre- and post- ICD-10-CM time periods.

Asthma is one category that can help illustrate the challenges. Analyzing previous years that used ICD-9-CM (2011-2015) show an average of 6,805 inpatient visits and 30,531 ER visits for asthma. However, using ICD-10-CM codes (for years 2016-2017) saw those numbers drop to an average of only 3,662 inpatient visits and 25,744 ER visits. ***This figures to a roughly 46% decline for asthma inpatient visits and 16% decline for asthma ER visits.*** While a small percentage of this decline may be real, the reduction in visits is largely a function of changes to the codes. Under ICD-9-CM there were three codes related to COPD that were assigned to asthma. With ICD-10-CM, these three codes have been rolled up along with other COPD codes and are no longer counted in the asthma definition, but instead are counted in COPD. We don't necessarily see a similar increase for COPD, both because COPD is a much more frequent diagnosis and because there were other changes to the definition for COPD which ultimately resulted in a small decline in COPD events between 2015 and 2016/2017.

The asthma diagnosis is just one of many categories that have seen dramatic increases and decreases with the coding change. In fact, mental health codes and injury codes experienced the most differences between 2015 and 2016. Because of these changes, we are working to make modifications to the query page to help users avoid misinterpreting the data and reaching faulty conclusions about whether certain conditions are increasing or decreasing. While we work to implement these changes, if you need figures for hospital discharge inpatient or ER data for 2016 or 2017, please contact us and we will work to provide the information you need.

"Change is the law of life. And those who look only to the past or present are certain to miss the future."
-J.F. Kennedy

Practice Exercise

Earlier in the Newsletter we walked through how to collect data on various causes of death in Missouri. In that example, we focused on Cole County. The following three questions will ask you to generate your own region-specific query within the Chronic Disease Death MICA and will increase in difficulty as the questions progress.

Q1: Create a query like the one described in the first article, but choose the County/Counties of your choice.
Years = 2007,2017.
Geography = Your Choice.
Age = Basic.
Sex = All.
Race = Basic.
Causes = Cancer, Heart disease, and Chronic Obstructive Pulmonary Disease.

How did your region compare to trends found at the state level?

Q2: Create a chart showing the difference between 2007 and 2017 death rate causes.

Q3: Using a 95% confidence interval, determine if there is a significant difference between your region's 2007 and 2017 death rates.

In 2017,

69%

of all Missouri deaths were due to chronic disease

Males

are significantly more likely to die from chronic disease than females in Missouri

6 in 10

Americans live with at least one chronic disease (CDC)

Chronic Disease MICAs

- Cancer Incidence
- Chronic Disease Death
- Chronic Disease Emergency Room
- Chronic Disease Inpatient Hospitalization

About the MOPHIMS Newsletter

The MOPHIMS User Group Newsletter was created in response to user requests for communication on updates to the MICA system, descriptions of new features, additional practice exercises, announcements of training opportunities, and any other new information about data that might help them perform their jobs more efficiently.

Newsletters will be published on a semi-annual basis. If you have ideas for content, please send them to Andrew.Hunter@health.mo.gov or Whitney.Coffey@health.mo.gov. We would especially like to feature stories describing your success at completing projects or obtaining grants using the MICA tools as well as interviews with public health professionals about your duties and how you use MICA to accomplish them.

- Past issues are available at **http://health.mo.gov/data/mica/MICA/newsletters.html**.

Contributors:
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How to Sign Up or Opt Out

If you have enjoyed this newsletter, please feel free to share it with your colleagues and community partners. We encourage them to sign up for the MICA User Group by sending an email to MOPHIMSUserGroup@health.mo.gov with the subject line MOPHIMS User Group. This will let us know to send newsletters to them directly so they do not miss any information. Also, we may occasionally distribute time-sensitive information on topics such as training opportunities via e-mail if the newsletter is not scheduled for publication prior to a registration deadline. Finally, the MOPHIMS User Group list helps us track the types of organizations using the tools, which is one of our performance measures.

If you would like to opt out of the MOPHIMS User Group, please send an e-mail with Unsubscribe in the subject line to MOPHIMSUserGroup@health.mo.gov. PLEASE NOTE: Depending on your position title, you may still receive other types of e-mail messages from us. For example, we are requested to send training information to all LPHA Administrators, even if they have unsubscribed from the MOPHIMS User Group.

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At left: Whitney and Evan received their 5-year service awards at DHSS. Does the photo on the left look familiar to longtime User Group members?

At right: Andy and Chelsea play a friendly game of bags at this summer's Employee Appreciation picnic. Andy's not at all competitive.